

U.S. Serial No. 09/462,845

**LISTING OF CLAIMS:**

The following is a marked-up version of the Claims, provided pursuant to 37 C.F.R. §1.121 (c)(1)(ii) with instructions and markings showing changes made herein to the previous version of the Claims on record. Underlining denotes added text while ~~strikeout~~ denotes deleted text.

1. (Currently Amended) A member of the genus *Bacillus* having a mutation or deletion of part or all of the gene encoding serine protease 1 (SP1), wherein said gene encoding serine protease 1 comprises SEQ ID NO:1, said mutation or deletion resulting in the inactivation of the SP1 proteolytic activity, and wherein said mutation or deletion is present in the catalytic triad sequence of said serine protease 1.

2. (Cancelled)

3. (Previously Amended) The microorganism according to Claim 1, wherein the member is selected from the group consisting of *B. licheniformis*, *B. lentus*, *B. brevis*, *B. stearothermophilus*, *B. alkalophilus*, *B. amyloliquefaciens*, *B. coagulans*, *B. circulans*, *B. lautus* and *Bacillus thuringiensis*.

4. (Original) The microorganism of Claim 1 wherein said microorganism is capable of expressing a heterologous protein.

5. (Previously Amended) The microorganism of Claim 4, wherein said heterologous protein is selected from the group consisting of hormones, enzymes, growth factors and cytokines.

6. (Original) The microorganism of Claim 5 wherein said heterologous protein is an enzyme.

7. (Previously Amended) The microorganism of Claim 6, wherein said enzyme is selected from the group consisting of proteases, carbohydrases, lipases,

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isomerases, racemases, epimerases, tautomerases, mutases, transferases, kinases, and phosphatases.

8. (Cancelled)

9. (Previously Amended) An expression vector comprising nucleic acid encoding SP1, wherein said SP1 comprises the nucleic acid sequence set forth in SEQ ID NO:1.

10. (Previously Amended) A host cell comprising an expression vector according to Claim 9.

11. (Currently Amended) A method for the production of a heterologous protein in a *Bacillus* host cell comprising the steps of

(a) obtaining a *Bacillus* host cell comprising nucleic acid encoding said heterologous protein wherein said host cell contains a mutation or deletion in the gene encoding serine protease 1, wherein said serine protease 1 comprises the nucleic acid sequence set forth in SEQ ID NO:1, and wherein said mutation or deletion is present in the catalytic triad sequence of said serine protease 1; and

(b) growing said *Bacillus* host cell under conditions suitable for the expression of said heterologous protein.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Previously Amended) The method of Claim 11 wherein said *Bacillus* cell is selected from the group consisting of *Bacillus subtilis*, *B. licheniformis*, *B. lentus*, *B. brevis*, *B. stearothermophilus*, *B. alkalophilus*, *B. amyloliquefaciens*, *B. coagulans*, *B. circulans*, *B. lautus* and *Bacillus thuringiensis*.

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17. (Previously Amended) The method of Claim 17 wherein said *Bacillus* host cell further comprises a mutation or deletion in at least one of the genes encoding apr, npr, epr, wpr and mrp.

18. (Cancelled)

19. (Twice Amended) The microorganism of Claim 1, further comprising a mutation or deletion in at least one of the genes encoding apr, npr, epr, wpr and mrp.

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## APPENDIX I

### CLEAN VERSION OF THE ENTIRE SET OF PENDING CLAIMS AS AMENDED IN THIS COMMUNICATION

The following is a list of the Claims as they would appear following entry of this amendment.

1. (Currently Amended) A member of the genus *Bacillus* having a mutation or deletion of part or all of the gene encoding serine protease 1 (SP1), wherein said gene encoding serine protease 1 comprises SEQ ID NO:1, said mutation or deletion resulting in the inactivation of the SP1 proteolytic activity, and wherein said mutation or deletion is present in the catalytic triad sequence of said serine protease 1.
3. (Twice Amended) The microorganism according to Claim 1, wherein the member is selected from the group consisting of *B. licheniformis*, *B. lentus*, *B. brevis*, *B. stearothermophilus*, *B. alkalophilus*, *B. amyloliquefaciens*, *B. coagulans*, *B. circulans*, *B. lautus* and *Bacillus thuringiensis*.
4. The microorganism of Claim 1 wherein said microorganism is capable of expressing a heterologous protein.
5. (Amended) The microorganism of Claim 4, wherein said heterologous protein is selected from the group consisting of hormones, enzymes, growth factors and cytokines.
6. The microorganism of Claim 5 wherein said heterologous protein is an enzyme.
7. (Amended) The microorganism of Claim 6, wherein said enzyme is selected from the group consisting of proteases, carbohydrases, lipases, isomerases, racemases, epimerases, tautomerases, mutases, transferases, kinases, and phosphatases.

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9. (Twice Amended) An expression vector comprising nucleic acid encoding SP1, wherein said SP1 comprises the nucleic acid sequence set forth in SEQ ID NO:1.

10. (Amended) A host cell comprising an expression vector according to Claim 9.

11. (Twice Amended) A method for the production of a heterologous protein in a *Bacillus* host cell comprising the steps of

(a) obtaining a *Bacillus* host cell comprising nucleic acid encoding said heterologous protein wherein said host cell contains a mutation or deletion in the gene encoding serine protease 1, wherein said serine protease 1 comprises the nucleic acid sequence set forth in SEQ ID NO:1, and wherein said mutation or deletion is present in the catalytic triad sequence of said serine protease 1.;

(b) growing said *Bacillus* host cell under conditions suitable for the expression of said heterologous protein.

16 (Amended) The method of Claim 11 wherein said *Bacillus* cell is selected from the group consisting of *Bacillus subtilis*, *B. licheniformis*, *B. lentus*, *B. brevis*, *B. stearothermophilus*, *B. alkalophilus*, *B. amyloliquefaciens*, *B. coagulans*, *B. circulans*, *B. lautus* and *Bacillus thuringiensis*.

17. (Twice Amended) The method of Claim 17 wherein said *Bacillus* host cell further comprises a mutation or deletion in at least one of the genes encoding apr, npr, epr, wpr and mrp.

19. (Twice Amended) The microorganism of Claim 1, further comprising a mutation or deletion in at least one of the genes encoding apr, npr, epr, wpr and mrp.